

Total No. of Questions : 6]

SEAT No. :

P 5834

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BE/Insem./Oct.-551

B.E. (E&TC)

EMBEDDED SYSTEM & RTOS

(2015 Pattern) (Semester - I)

Time : 1 Hour]

[Max. Marks :30

Instructions to the candidates:

- 1) *Neat diagrams must be drawn wherever necessary.*
- 2) *Assume suitable data, if necessary.*

- Q1)** a) Draw and explain the hardware architecture of embedded system. [6]
b) With an example, explain need of optimizing design metrics. [4]

OR

- Q2)** a) Explain the waterfall model. State its merits and demerits. [6]
b) What are the criterion for memory selection in embedded system design. [4]

- Q3)** a) Compare General Purpose Operating System (GPOS) and RTOS with respect to :
- i) Multitasking
 - ii) Interprocess communication
 - iii) Timer
 - iv) Memory management [6]
- b) Explain any two scheduling algorithms. [4]

OR

- Q4)** a) With respect to scheduling algorithm, explain the following :
CPU utilization, Throughput, Turnaround time, Wait time [6]
b) What is real time system? Explain with a suitable example. [4]

P.T.O.

- Q5)** a) What are different methods of multitasking in μ cos II? Explain with the help of task state diagram. [6]
b) Explain the features of μ cos II. [4]

OR

- Q6)** a) Explain the problem of priority inversion with the help of three tasks? How to avoid this problem. [6]
b) Explain the following functions : [4]

OS Time Dly ()

OS Time Dly HMSM ()

